New foundation launched to drive European innovation in the production of battery cells

The 'Technology Cluster Battery Cell', brings together research institutions and industrial players to create new methods and toolchains to accelerate the end-to-end process of battery cell development through to scaled production

Aachen/Munich, November 9, 2023 – Capgemini, Fraunhofer Research Institution for Battery Cell Production FFB, PEM Motion and the Chair of Production Engineering of E-Mobility Components (PEM) of RWTH Aachen University announce the foundation of the "Technology Cluster Battery Cell". The initiative aims to take advantage of new technologies, such as AI, to develop differentiating methods and tools to drive innovation in the production of battery cells. The final objective is to halve the development time of a battery cell – its design and prototyping through to its industrialization - from 3 to 4 years to 1 to 2 years.

By combining their complementary capabilities and infrastructure, scientists and industry partners are together creating a dedicated research and development network with competencies along the entire battery cell value chain. The new cluster aims to extend the collaboration to the larger battery ecosystem, including manufacturers for cells and their components, software vendors, and automotive Original Equipment Manufacturers (OEMs).

"Processes for developing and producing new battery cells are currently too slow and prices are too high," said Professor Achim Kampker, Managing Director of Fraunhofer FFB, Director of PEM and shareholder of PEM Motion. "*With this initiative, thanks to the strong partnerships and innovative digital solutions that we will develop, we are aiming to make the European industry for battery cells more competitive.*"

William Rozé, CEO of Capgemini Engineering and Member of the Capgemini Group Executive Board, said: *"We are enthusiastic to join forces with the leading minds from research institutes as well as industrial players, to accelerate towards a sustainable and more competitive battery industry in Germany and Europe. Through the Technology Cluster Battery Cell initiative, we are aiming to build an open and value-oriented ecosystem that generates synergies in all phases of the cell development process. Our objective is to create significant value for the battery ecosystem and the electric mobility industry as a whole."*

From a scientific perspective, Fraunhofer FFB will bring its unique infrastructure and capabilities for large-scale battery cell production, and RWTH Aachen University's PEM chair its deep experience in technology-driven research in almost all areas of the electric mobility value chain.

From an industry perspective, Capgemini will bring its expertise in product and process simulation and data-driven optimization. PEM Motion - a spin-off from the Chair of "Production Engineering of E-Mobility Components" of RWTH Aachen University - will add its extensive experience in innovative battery cell development and production processes.

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About Fraunhofer FFB
The Fraunhofer Research Institution for Battery Cell Production FFB is a facility of the Fraunhofer-Gesellschaft at the Münster site. Its concept provides for a combination of laboratory and production research for different battery cell formats - round cell, prismatic cell and pouch cell. Fraunhofer FFB employees research individual process steps or the entire production chain as required. Together with the project partners of the Battery Research Center MEET of the WWU Münster, the Chair PEM of the RWTH Aachen and the Research Center Jülich, the Fraunhofer-Gesellschaft is creating an infrastructure in Münster that will enable small, medium-sized and large companies, as well as research institutions, to test, implement and optimize the near-series production of new batteries. The German Federal Ministry of Education and Research and the state of North Rhine-Westphalia are funding the establishment of the Fraunhofer FFB as part of the "FoFeBat" project with a total of up to 680 million euros.
https://www.ffb.fraunhofer.de/en.html

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About PEM Motion
PEM Motion is Driving the Future. Our company focuses on a variety of topics in the field of electromobility and was founded in 2014 as a spin-off of the chair for "Production Engineering of E-Mobility Components" (PEM) at the RWTH Aachen University by Prof. Achim Kampker and Dr. Christoph Deutskens. PEM Motion has established offices across Europe and North America in four locations with over 65 employees. As a consulting, training, and engineering service provider, PEM accompanies its clients from the first concept through series production. By providing a pragmatic and holistic approach, PEM Motion excels in the development and deployment of smart technologies. Our services range from product development, process engineering, validation, and industrialization of electromobility components such as battery cells and electric motors to projects developing infrastructure, business development, and ecosystem management. https://pem-motion.com/

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About PEM RWTH Aachen
The Chair of Production Engineering of E-Mobility Components (PEM) of RWTH Aachen University was founded in 2014 by StreetScooter co-inventor Professor Achim Kampker. In ten research groups, the team is dedicated to all aspects of the development, production, and recycling of battery systems and their components, as well as fuel cells and the production of the electric powertrain and entire vehicle concepts. A total of nearly 80 researchers, more than 30 non-scientific employees and around 130 student assistants are employed at the headquarters in the German-Dutch industrial park Avantis as well as in the electric mobility laboratory "eLab" and PEM's e-truck research hall. The team is active in teaching as well as in nationally and internationally funded research projects and in collaboration with renowned industrial partners. The focus is always on sustainability and cost reduction – with the goal of a seamless "Innovation Chain" from basic research to large-scale production in the immediate vicinity. PEM provides the breeding ground for partly interconnected spin-offs and mobility products such as "PEM Motion" or "Velocity Aachen".
https://www.rwth-aachen.de/go/id/a/?lidx=1

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